by Laura Quarantiello, KI6AOK

KB9VBR's All-Copper J-Pole Antenna

The J-Pole antenna is one of the best known amateur radio antennas. It's simple to build, easy to put up, and withstands the elements like a champ. Plans for building a J-Pole in one of its many guises can be found all over the Internet and in the back issues of this magazine and others catering to radio enthusiasts. In fact, there are so many plans for this antenna that it's tough to figure out which one to use. As a new ham, and one who wanted to get on the air sooner rather than later, I decided that *buying* a J-Pole was the best option for me. The antenna I eventually settled on was KB9VBR's All-Copper J-Pole (www.kb9vbr.com/jpole.htm).

I originally found this antenna for sale by its builder, Michael Martens, on eBay. The price was right and, best of all, I wouldn't have to worry about soldering or tuning—the antenna is shipped already assembled and ready to go. Michael responded to a pre-purchase e-mail question very quickly, so I knew technical support wouldn't be a problem. He builds these antennas himself and has made hundreds of them. Each antenna is individually tested before shipment, and mine arrived via Priority Mail within two days, well packaged in cardboard.

The antenna stands 69 inches tall, with the radiator measuring 58 inches and the stub 19 inches. An SO-239 connector is soldered on at the point of lowest SWR, ready to accept a coax cable with a PL-259 fitting. I ordered the 2-meter version of the antenna, which is tuned for 146 MHz and sports an SWR of 1.2:1 at that frequency. According to Michael, the SWR is 1.4:1 or less throughout the entire 2-meter band. This version of the antenna will also load up on 70 centimeters, where the SWR is reportedly 2:1 to 2.5:1 between 445 and 450 MHz. Gain is reportedly 3 dB over a quarter-wave groundplane.

The antenna is constructed of Type M copper pipe, soldered with rosin core solder. The fit and finish out of the box are solid, with all joints well soldered. The attention to detail is obvious and you can tell this isn't somebody's weekend project. The top of each element is covered with a copper cap that is soldered on.

The antenna comes "plain," in its natural copper finish, and after exposure to the elements it will oxidize into a dark brown patina that does not affect the performance of the antenna. To protect it, you can paint it with any non-metallic paint. I thought about doing this to blend the antenna into the environment, but the copper looked so good, I ended up spraying it with a few coats of clear lacquer instead.

On The Air

Mounting the antenna is easy once you decide on a suitable mast. The antenna is at DC ground, so it can be clamped directly to a metal mast or support and still radiate. I used an extendable fiberglass tree trimmer pole, painted white, and clamped the antenna to it with two hose clamps. The mounting mast should not extend above the T connector. The antenna has an 11-inch mounting stub, which is plenty for a secure mount. I connected a length of RG-8X coaxial cable to the SO-239 connector and used plastic ties to secure it to the pole. Once I waterproofed the connection, I was ready to raise the antenna into place. Michael notes that the antenna's SWR can be affected by nearby buildings, so he recommends mounting it either above or at least six feet away from any structures,.

The KB9VBR J-Pole antenna at Laura's California QTH. (It's also a great scanner antenna; remember, it's tuned for 146 MHz, so if most of your local action is in the VHF band it'll perform quite well).

Once I had the antenna up, the mast U-bolted into place, and the coax run, I was ready to go on the air. Connecting the coax to my Yaesu VX-6R, I tuned around and found an active repeater. During a lull, I put my callsign out and received an immediate reply. Imagine my surprise when I was told that the repeater was on Catalina Island—69 miles away from my location. Not bad!

A Bargain And Then Some

KB9VBR's All-Copper J-Pole is a steal at $20 plus $6 shipping and handling for the original 2-meter version. There are also several other versions of the J-Pole available: the Breakaway 2-meter J-Pole ($25) is a two-piece design that will fold to fit in the trunk of a car; the 6-meter J-Pole ($45) measures 13.5 feet and is also a two-piece design; the 222-MHz J-Pole ($18) is 29 inches long; and the 440-MHz J-Pole ($16) is 30 inches overall. Special requests are welcome. Contact Michael Martens, KB9VBR, at KB9VBR@yahoo.com, phone 715-845-2794, or order online at www.kb9vbr.com/jpole.htm. ■